

Myanmar (Rabinowitz and Khaing 1998). However, farther south, we noted that Black Muntjacs are mainly above 1,500 m, extending sparsely up into the temperate forest at least to 2,600 m, whereas Red Muntjac occurs at lower elevations. In south-eastern Tibet, Black Muntjacs were at 1,800-2,600 m and Red Muntjac lower down (Schaller *et al.* 2000). We had found that the Capped Leaf Monkey (*Trachypithecus pileatus*) has penetrated northward from the mountain forests of Arunachal Pradesh in India into the big bend of the Yarlung Tsangpo in Tibet, and we expected a similar distributional pattern in Black Muntjac. One of us (GBS) visited Arunachal Pradesh on an ecotourism assignment in 2000. Local hunters characteristically hang trophies on the walls of their home. Many muntjac specimens were examined along the Luhit river, Siang river as far north as Tuting, around Tawang (Fig. 1), and elsewhere. All were Red Muntjacs even at high elevations, and near Tawang one animal of this species was observed at 3,000 m, higher than any elevation reported for Black Muntjac. Possibly the Black Muntjac reached southeast Tibet via a northern route, bypassing India. But a more widespread search for the Black Muntjac is required before its distributional dynamics can be discussed with confidence.

The evidence suggests some degree of competition and ecological separation between Red and Black Muntjacs, species with a long, separate evolutionary history judging

by their DNA (Amato *et al.* 2000). The Black Muntjac may have evolved somewhere in China and entered Myanmar from the northern Gaoligongshan, bypassing the high mountains via the Drung (Tarong) river valley, or via the low-lying southern part of this range. Considering the distribution of the two species in China and India, the Red Muntjac may have colonized a vast area first and the Black Muntjac later moved into sparsely occupied terrain, or the Black Muntjac survives in the eastern Himalaya as relic populations at high elevations with the Red Muntjac having become dominant.

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5. ON THE PANGOLIN AND PORCUPINE SPECIES OF BANGLADESH

There seems to be some confusion as to which species of porcupine and pangolin occur in Bangladesh. The country is located on the eastern fringe of the distribution of the Indian pangolin *Manis crassicaudata* and Indian porcupine *Hystrix indica*. The western / south-western limit of the Chinese pangolin *Manis pentadactyla* and crestless Himalayan porcupine *Hystrix brachyura* is also in this region. It is

because of this transition that the confusion prevails.

Khan (1985) mentioned that *M. crassicaudata* occurs widely, but in small numbers in areas bordering northeast India as the main range. He doubted presence of *M. pentadactyla* in eastern areas, but mentioned no sight record. From my field survey experiences in north-eastern India, especially near the Indo-Bangladesh border in

Meghalaya, Assam and Mizoram, I could not find any evidence of *crassicaudata*, but *pentadactyla* was common all over. This clearly indicates that the pangolins of northern Mymensingh, Sylhet and Chittagong Hill Tracts are *pentadactyla* and not *crassicaudata*. The animals from west of Padma-Meghna rivers (the conspicuous zoo-geographic barrier in the region) are apparently *crassicaudata* as it has been recorded from the adjacent districts of West Bengal (Agrawal *et al.* 1992).

Khan (1985) mentions that *Hystrix indica* occurs widely and was earlier common in the entire country. But the photo accompanying his text was that of *H. brachyura* and certainly not *indica*. Here again, my field experience near the Indo-Bangladesh border in Meghalaya, Assam and Mizoram indicated that porcupines of northern Mymensingh, Sylhet and Chittagong Hill Tracts are *brachyura* and not *indica*. Again the animals from west of Padma-Meghna rivers (the conspicuous zoo-geographic barrier in the region) are

apparently *indica* as it has been recorded from the adjacent districts of West Bengal (Agrawal *et al.* 1992).

These mistakes have been repeated in Islam *et al.* (2000). One reason for such mistakes was not seeing the specimens or not examining them critically, or simply relying upon local reports without cross-checking as is evident in some works in northeast India (Chatterjee 1989, Chetry *et al.* 2001, Singh *et al.* 1994). The camera-trap record of porcupines in Kaziranga (Karanth and Nichols 2000) was also of the Crestless Himalayan Porcupine *Hystrix brachyura* and not Indian Porcupine *Hystrix indica* as mentioned.

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6. CAT SNAKE *BOIGA TRIGONATA* IN DIET OF JERDON'S BAZA *AVICEDA JERDONI*

Jerdon's Baza *Aviceda jerdoni* is one of the least studied raptors in India. It is distributed in northern West Bengal, Sikkim, Assam, North-eastern hill states, hills of Karnataka, Kerala, Tamil Nadu, Eastern Ghats and Andhra Pradesh, and affects tropical moist-deciduous to broadleaved evergreen forest (Ali and Ripley 1983; Grimmett *et al.* 1998; Kazmierczak 2000). Its diet consists of lizards, frogs, grasshoppers, and other large insects (Ali and Ripley 1983; Grimmett *et al.* 1998), birds eggs (Grossman *et al.* 1965) and a record of a small snake (del Hoyo *et al.* 1994). Crabs, bats, mice, shrews and rarely birds are recorded in the diet of other equal sized bazas found in different parts of the world (Grossman *et al.* 1965).

During the study on the breeding of the Jerdon's Baza in Buxa Tiger Reserve, West Bengal, two cat snakes *Boiga trigonata* were recorded along with its normal diet of insects, frogs and calotes lizards. The snakes, c. 50 cm long, were brought to the nest on different occasions during the third week of the nesting period. Adults fed small pieces of the snakes to the nestlings and consumed the thin tail portions

themselves. This observation indicates that snakes are probably a part of the Jerdon's Baza's regular diet.

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